UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/650,855	08/29/2003	Kyung-Hun Jang	249 / 397	7411

27849 7590 11/21/2007	**EXAMINER**
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SUITE 500	**ART UNIT** / **PAPER NUMBER**
FALLS CHURCH, VA 22042	2141

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11/21/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

		Application No.	**Applicant(s)**
Office Action Summary		10/650,855	JANG ET AL.
		Examiner	**Art Unit**	
		Nicholas R. Taylor	2141	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>07 September 2007</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4,15 and 17-20* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,15 and 17-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>29 August 2003</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some * c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

1.   Claims 1-4, 15, and 17-20 have been presented for examination and are

rejected.

Response to Arguments

2.   Applicant's arguments filed September 7th, 2007, have been fully considered but

they are deemed not persuasive.

.3.   In the remarks, applicant argued in substance that:

(A) The prior art of Huang does not teach a real-time multimedia generation rate

calculated by a layer in the wireless terminal in accordance with information from

another layer within the wireless terminal. Instead, Huang teaches a data rate set point

based on a feedback report sent from a client to a server. If no report has been

received within a time period, the serer may gradually adjust the data rate set point, but

the adjustment is not in accordance with the buffer state information and loss rate as

recited in claim 1 (e.g., as in Huang paragraphs 0020-0026 and fig. 2). Furthermore,

Applicant's invention extracts the required calculation data for the RTCP layer from the

MAC layer of the wireless terminal, which is dissimilar to the $BYTE_{BUFFERED}$ calculation

of Huang.

As to point (A), Huang teaches a system that dynamically adjusts a real-time

streaming multimedia data rate based on both bandwidth tracking and network buffer

control (see paragraph 0013 and fig. 2). That is, the source of the data generation uses

feedback information from within the network in addition to "information available to the

server itself" (paragraph 0019). Thus, Huang does not rely solely on the feedback

report data in calculating the data generation rate (i.e., the data rate set point).

Furthermore, the claim language as currently presented does not preclude using

network information from a feedback report as long as it is eventually supplied from a

first layer to a second layer of the terminal.

In paragraphs 0023-0026, Huang discusses some of the specific variables used

in calculating the real-time multimedia generation rate. Huang calculates the rate based

on transmission buffer state information (e.g., paragraph 0022 and 0023 including the

historical variables and feedback report information concerning the transmission buffer)

and a multimedia data loss rate (e.g., paragraphs 0023-0026 where the data loss via

throughput is used in the calculations; see also packet loss of paragraph 0022). Also,

given the broadest reasonable interpretation of the term "layer", Huang extracts data

from different layers of the terminal architecture in order to calculate the proper

generation rate (see, e.g., using data from different source data layers of the

architecture to calculate the generation rate in paragraph 0023 and fig. 4). As to the

argument that Applicant's invention specifically uses the "MAC layer" to send

information to the "RTCP layer" of the wireless terminal, this may distinguish Applicant's

invention from the Huang reference. However, this limitation is not present in the

currently amended claims. While the Applicant's claims are read in light of the

specification, limitations from the specification will not be read into the claims.

Claim Rejections - 35 USC § 102

4.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5.   Claims 1-4, 15, and 17-20 are rejected under 35 U.S.C. 102(e) as being

anticipated by Huang et al. (U.S. PGPub 2003/0198184).

6.   As per claims 1 and 3, Huang teaches an open-source method for controlling a

multimedia data generation rate, comprising:

(a) generating multimedia data in real time according to a current multimedia

data generation rate and transmitting the multimedia data from a data generator to a

wireless terminal; (Huang, paragraphs 0013 and 0019 and fig. 2)

(b) supplying transmission buffer, through which the multimedia data is

transmitted, state information and a multimedia data loss rate during the transmission of

the multimedia data from a first layer of the wireless terminal to a second layer of the

wireless terminal; (Huang, e.g., paragraphs 0020-0023 and figs. 3 and 4, where data is

transferred between layers of the Huang system)

(c) calculating a real-time multimedia data generation rate based on the

transmission buffer state information and the multimedia data loss rate, and transmitting

the real-time multimedia data generation rate from the second layer to the data

generator; and

. (d) generating multimedia data in real-time according to the real-time calculated

multimedia data generation rate and transmitting the generated multimedia data from

the data generator to the wireless terminal (Huang, paragraphs 0023-0026 where the

data generation rate is calculated both on buffer state information and data loss rate;

see also figs. 3 and 4).

7.   As per claims 2 and 4, Huang teaches the system further wherein (c) comprises:

(c1) receiving the transmission buffer state information and the multimedia data

loss rate from the second layer; and (Huang, e.g., paragraphs 0020-0021 and fig. 2)

(c2) calculating the real-time multimedia data generation rate based on the

transmission buffer state information, by lowering a current multimedia data generation

rate when the transmission buffer state information indicates that a large amount of

standby multimedia data exists in the transmission buffer or the multimedia data loss

rate is high or increasing the current multimedia data generation rate when the

transmission buffer state information indicates that a small amount of standby

multimedia data exists in the transmission buffer or the multimedia data loss rate is low

(Huang, paragraphs 0023-0026 where the data generation rate is calculated both on

buffer state information and data loss rate, then increased or lowered based on the

indication).

8.   As per claim 15, Huang teaches the system further including a computer-

readable recording medium on which a program enabling the method of claim 1 is

recorded (Huang, paragraphs 0013-0015).

9.   As per claim 17, Huang a method for controlling a multimedia data generation

rate, comprising:

        determining a current wireless channel state; and (Huang, e.g., paragraphs

0020-0021 and 0023; see fig. 2).

        generating multimedia data in real time according to a calculated multimedia data

generation rate and transmitting the generated multimedia data, wherein: when the

current wireless channel state is variable, calculating the multimedia data generation

rate based on transmission buffer state information and multimedia data loss rate, and

(Huang, paragraphs 0023-0026 where the data generation rate is calculated both on

buffer state information and data loss rate)

        otherwise, calculating the multimedia data generation rate based on a

permissible polling cycle and packet length (Huang, e.g., paragraphs 0020-0021 and fig.

2, where if no variability is detected the rate is not adapted).

10.   As per claim 18, Huang teaches the system further wherein calculating the multimedia data generation rate based on transmission buffer state information and multimedia data loss rate comprises:

generating multimedia data in real time according to a current multimedia data generation rate and transmitting the multimedia data from a data generator to a first layer of the wireless terminal; and (Huang, paragraphs 0023-0026)

supplying the transmission buffer, through which the multimedia data is transmitted, state information and the multimedia data loss rate during the transmission of the multimedia data from a second layer in the wireless terminal to a third layer in the wireless terminal; and transmitting the multimedia data generation rate from the third layer to the data generator (Huang, e.g., paragraphs 0020-0023 and fig. 2-4, where data is transferred between layers of the Huang system).

11.   As per claim 19, Huang teaches the system further wherein calculating the multimedia data generation rate based on a permissible polling cycle and packet length comprises: receiving the current multimedia data generation rate; and receiving the permissible polling cycle and packet length (Huang, e.g., paragraphs 0020-0021 and fig. 2).

12.   As per claim 20, Huang teaches the system further wherein receiving the permissible polling cycle and packet length includes receiving from an access point (Huang, paragraphs 0019-0020 and fig. 1).

Conclusion

13.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Nicholas Taylor whose telephone number is (571) 272-

3889. The examiner can normally be reached on Monday-Friday, 8:00am to 5:30pm,

with alternating Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Rupal Dharia can be reached on (571) 272-3880. The fax phone number

for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

NT   11-16-07

Nicholas Taylor
Examiner
Art Unit 2141

JASON CARDONE
SUPERVISORY PATENT EXAMINER